

L 28321-66 EWT(1)/EWT(m)/EWP(t)/GTI IJP(c) JD
ACC NR: AP6013085 SOURCE CODE: UR/0048/66/030/004/0598/0700

AUTHOR: Kats, M.L.; Golubentseva, L.I.; Gyunsburg, K.Ye.

ORG: none

TITLE: Activator trapping centers in alkali halide crystals doped with lead ²⁷ Report,
Fourteenth Conference on Luminescence held in Riga 16-23 September 1965

SOURCE: AN SSSR. Izvestiya Seriya fizicheskaya, v. 30, no. 4, 1966, 698-700

TOPIC TAGS: crystal phosphor, alkali halide, sodium chloride, luminescence, absorption, x radiation, absorption spectrum, excitation spectrum

ABSTRACT: In earlier studies by the authors' group it was shown that x irradiation of lead-activated alkali halide crystals leads to reduction of the usual activator absorption and to the appearance of atomic absorption bands that peak at 254 m μ in NaCl:Pb and KCl:Pb and at 276 m μ in KBr:Pb. It was established that the centers responsible for these new absorption bands are electronic. In the present work there were investigated the spectra of NaCl:Pb phosphor after quenching from 500°C and higher temperatures. This treatment led to the appearance of two new excitation bands peaking at 232 and 328 m μ , while only a band at 328 m μ is evinced in the absorption spectrum. The peak of the luminescence band under excitation in this region is situated at 520 m μ . The intensity of the new excitation bands increases with temperature from which

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the phosphor is quenched. The rate of quenching is also significant. Storage of the quenched phosphors at room temperature leads to decrease in the intensity of these bands and low-temperature anneal eliminates them completely. The spectral characteristics of the investigated NaCl:Pb phosphors are presented in a series of figures illustrating the effect of quenching and of the activator concentration. It was found that if an NaCl:Pb phosphor quenched from 350-400°C is x irradiated and then illuminated for several minutes by appropriate ultraviolet there also appear in its excitation spectrum bands at 232 and 328 m μ . On the basis of the experimental data it is concluded that in quenched crystal phosphors there may exist two types of activator trapping centers: divalent lead ions joined to a cationic vacancy and isolated Pb²⁺ ions. The 232 and 328 m μ excitation bands are associated with $^1S_0 \rightarrow ^1P_1$ and $^1S_0 \rightarrow ^3P_1$ transitions in the isolated divalent lead ions. Orig art. has: 4 figures.

SUB CGDE: 20/ SUEM DATE: 00/ ORIG REF: 005/ OTH REF: 000

Card 2/2 CC

I 28322-66 EWP(j)/EWT(m)/EWP(t)/ETI IJP(c) RH/JD

ACC NR: AP6013086

SOURCE CODE: UR/0048/65/030/004/0701/0703

AUTHOR: Kats, M. L.; Gyunsburg, K. Ye.; Golubentsevn, L. I.

ORG: none

TITLE: Spectral characteristics of NaCl:Cu and KCl:Cu crystal phosphors and their
water solutions /Report, Fourteenth Conference on Luminescence held in Riga 16-23
September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 701-703

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, sodium chloride,
potassium chloride, absorption spectrum

ABSTRACT: It is known that profound similarity is observed in comparing the spectral
characteristics of alkali halide crystals activated by heavy metal ions with their
water solutions. For example in the case of Tl⁺ and Pb²⁺ the position of the absorp-
tion peaks in the wavelength scale virtually does not change in going from KCl:Tl
(KCl:Pb) to the solution. This is explained by the fact that the complexes or quasi-
complexes that form in these solutions are linked primarily by ionic bonds; in this
case the electron shells of the interacting components essentially retain their
individual characteristics. It was deemed of interest to determine whether a like
analogy between the spectral characteristics of the crystal and the water solution

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ACC NR: AP6013086

obtains in the case of introduction of a metal that forms complexes with predominantly covalent bonds. Accordingly, in the present work there were compared the absorption spectra of NaCl:Cu and KCl:Cu crystal phosphors with their water solutions. Here there was not observed agreement between the positions of the absorption bands associated with type I centers. The absorption peaks of type I centers are situated at 254-255 m μ in the case of NaCl:Cu phosphors and at 260-262 m μ for KCl:Cu phosphors, whereas the peak of the absorption band of solutions is observed at 272-274 m μ in both cases. However, upon chilling to about -150°C there appears in the spectrum of un-quenched NaCl:Cu crystal an additional band peaking at 272-274 m μ , i.e., coinciding with the absorption band of the solution. Analogous behavior is exhibited by the respective luminescence bands. It is inferred from the experimental data that type II centers, i.e., copper ions lodged in the vicinity of microdefects in the crystal lattice, are responsible for the 272 m μ absorption bands and the luminescence at 485-500 m μ . Water solutions of CuCl with an excess halide ion concentration do not luminesce at all at room temperature, but upon chilling to -140°C emit intense blue-green luminescence. It is concluded from comparison of the spectral characteristics of the respective solutions with the absorption and luminescence spectra of type II centers in NaCl:Cu and KCl:Cu phosphors that at least centers of one kind in these phosphors consist of complexes with predominantly covalent bonds. These complexes apparently form in the vicinity of defects in the crystal lattice. Orig. art. has: 3 figures.

SUB CODE: 20/

SUBN DATE: 00/

ORIG REF: 011/

OTH REF: 003

Card 2/2 CC

L 04826-67 EWT(l)/EWT(m)/EWF(t)/ETI IJF(c) JD
ACC NR: AP6026971 SOURCE CODE: UR/0051/66/021/002/0188/0191

AUTHOR: Gyunsburg, K. Ye.; Golubentseva, L. I.; Kats, M. L.

ORG: none

TITLE: Absorption and luminescence centers in NaCl-Cu and KCl-Cu phosphor crystals

SOURCE: Optika i spektroskopiya, v. 21, no. 2, 1966, 188-191

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, CRYSTAL
ABSORPTION

ABSTRACT: An examination of data previously reported in the literature shows that the 272-274 nm absorption and 485-500 nm luminescence bands of copper-activated alkali-halide crystals are due to the so-called type II centers. In order to elucidate the structure of these centers, a study was made on NaCl-Cu and KCl-Cu phosphors to determine the relationship between these centers and the possibility of formation of complexes in the phosphors. To this end, absorption spectra of mixed aqueous solutions of CuCl and the alkali metal chlorides (KCl and NaCl) were taken. Comparison of these spectra with the absorption and excitation spectra of NaCl-Cu and KCl-Cu phosphors showed a complete similarity of the spectra of the solutions with the absorption bands of type II centers. If it is assumed that copper complexes with predominantly covalent bonds are formed in the solutions studied, one can deduce from this similarity that at least one kind of type II centers in NaCl-Cu and KCl-Cu crystals consists of complexes with predominantly covalent bonding. The formation of such complexes is

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UDC: 535.373.1

30
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ACC NR: AP6026971

apparently possible in defect sites of the lattice, where ionic bonds are weak. Orig.
art. has 5 figures.

SUB CODE: 20/ SUBM DATE: 13Apr65/ ORIG REF: 011/ OTH REF: 007

Card 2/2 gd

L 31134-66 EWP(j)/EWT(l)/EWT(m)/EWP(e) RM/WH
ACC NR: AP6012859

SOURCE CODE: UR/0368/66/004/0351/0353

AUTHOR: Berezin, V. I.; Zubov, V. A.; Kats, M. L.; Kovner, M. A.; Sidorov, N. K.
Stal'makhova, L. S.; Sunzhchinskij, M. M.; Turbin, Yu. P.; Shabalov, I. K.

ORG: none

z /

54
52
B

TITLE: Intensities and line thresholds of stimulated Raman scattering

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 4, 1966, 351-353

TOPIC TAGS: laser, stimulated emission, Raman scattering, stimulated Raman scattering

ABSTRACT: The relative values for the threshold I for the intensity of the exciting light necessary to attain stimulated Raman scattering in toluene, chlorobenzene, and pyridene have been measured. Using a theory of SRS developed by P. A. Apanasevich and B. I. Stepanov (Zhurnal prikladnoy spektroskopii, v. 1, 1964, p. 202), the authors derived the following formula

$$I_B/I = (I_\infty/\delta)(I_\infty/\delta)_B \nu_{\beta B}^3/\nu_{\beta}^3 n_{B B}^3/n^3, \quad (1)$$

where I_∞ is the integral intensity of the SRS line, δ is the line width, ν_{β} is the frequency of the scattered light, n is the index of refraction, and the subscript B identifies these quantities for benzene. The experimental values of

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UDC: 535.22/36

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Table 1. Main parameters and oscillation thresholds for SRS

Substance	Δv	ν_g	ν_s	ν_{D}	ν_{Na}	ν_{K}	ν_{Cs}	ν_{Li}	ν_{H}	ν_{D}	ν_{He}
benzene	992	13411	1.8	1	1	1.50	1	1	1	0.25	
1,3-pentadiene	1655	12748	15	1.6	0.2	1.43	0.5	0.5	0.40		
3-methyl-1,3-butadiene	1638	12765	7	1.3	0.3	1.42	0.5	1.6	2.24		
carbon disulfide	656	13747	1	1.6	3	1.63	1.6	1.6	1.6	0.55	
styrene 1	998	13405	2	0.7	0.6	1.55	0.5	0.5	0.5	0.59	
styrene	1602	12801	3	0.9	0.6	1.55	0.9	0.9	0.9	0.90	
toluene	1634	12769	3	1.6	0.9	1.55	0.5	0.5	0.5	0.42	
chlorobenzene	1003	13400	1.6	0.37	0.4	1.50	1.1	1.1	0.78		
bromobenzene	1002	13401	1	0.45	0.8	1.52	1	1	0.81		
pyridine	992	13411	1.2	0.46	0.8	1.56	1.1	1.1	0.82		

1/I for substances investigated in the present paper and in an earlier paper by three of the authors (Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, 1964, p. 784) are compared with the theoretical values derived by using formula (1) (see Table 1). The value of 1/I for the line $\Delta v = 992 \text{ cm}^{-1}$ in benzene was taken to be unity. Since the values of $n(\nu_g)$ for a ruby laser source were unavailable, the values of n for the D-line of sodium (n_D) were used in the calculations. Orig. art. has: 17 formulas and 1 table.

SUB CODE: 20/ SUBM DATE: 17Mar65/ ORIG REF: 004/ ATD PRESS: 4240

Cord 2/2

KATS, M. M.

"Calculation of Beams for Temporary Loads." Thesis for Degree of Cand. Technical
Sci. Sub 25 Jun 49, Moscow Order of the Labor Red Banner Engineering Construction
Inst imeni V. V. Kuybyshev.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering
In Moscow in 1949. From Yechernyaya Moskva. Jan-Dec 1949.

KATS, M.M.

124-11-13127

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr. 11, p. 123 (USSR)

AUTHOR: Kats, M. M.

TITLE: Free Vibrations of a Beam Carrying Uniform Masses.
(Sobstvennyye kolebaniya balki, nesushchey ravnyye massy)

PERIODICAL: V sb.: Issledovaniya po teorii sooruzheniy, Nr. 7, Moscow,
Gosstroyizdat, 1957, pp. 159-165

ABSTRACT: Bibliographic entry.

Card 1/1

BEZUKHOV, Nikolay Ivanovich; LUZHIN, Ol'gert Vladimirovich; Prini-
mal uchastiye KATS, M.M.; GORYACHEVA, T.V., red.;
KASIMOV, D.Ya., tekhn. red.

[Stability and dynamics of structures in examples and
problems] Ustoichivost' i dinamika sooruzhenii v prime-
rakh i zadachakh. Moskva, Gosstroizdat, 1963. 370 p.
(MIRA 17:1)

RAVVIN, V.A., prof. doktor med. nauk; KTS, M.M., starshiy laborant.

Prophylaxis for anthracosis. Br'ba s oll. st395-2.3 - 16
(NIRK 18t2)
I. Donetskiy meditsinskiy institut.

KARIS, IIIA.

AUTHOR: Ivlev, D.D.
 Sov7/24-58--35/39

TITLE: Conference on Sustained Static Strength of Turbine Components Working at High Temperatures (Sovetskaya Poddol'skaya i staticheskaya prochnost' detaley turbin na vysokoy temperatury)

PERIODICAL: Izvestiya Akademii Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk, 1958, No. 4, pp. 149-150 (USSR)

ABSTRACT: The Commission on the Strength of Gas Turbines from the Institute im. Rakhmanik AF SSSR (Institute of Mechanics of the Ac.d.-Prof.) (Chairman - Yu. I. Babotov) and the Scientific-Research Institute of Turbine Construction (Chairman - V.K. Savonov) held a conference during November 20-22, 1957 on the sustained static strength of turbine components working at high temperature.

Sov7/24-58-4--35/39
 Conference on Sustained Static Strength of Turbine Components Working at High Temperatures

G.A. Dul'zhev (Mechanika) described the results of an experimental investigation of creep in the boiler steel 12Kh18N10T (Kh18N10T) under complex stress conditions. N.N. Kavalkin (Institut im. Polzunova) gave a paper on "Effect of Temperature on the Deformation and Strength of Tubes" containing results on the study of creep under complex stress conditions.

A.S. Gribin (Vysokaya Vysshaya Teplovo-sostoye uchilishche im. Mervynskogo) showed a paper on "Calculation of the Three-Point Bending of Gas Turbines in the Creep Deformation Region". L.M. Mel'nikov (Leningradskiy Goucharovskiy Universitet - Leningrad State University and TsNIIMash) dealt with creep under initial plastic deformation, with a view to calculating the deformation state of components made from special heat-resistant steels.

Yu.N. Babotov (Novosibirskiy Gosudarstvennyy Institut Tekhniki) gave a paper on "Construction of the Apparatus for Investigation of the Static Strength of Components of Turbines at High Temperatures". He described the results of theoretical and experimental investigations on unsteady creep under complex stress conditions. He pointed out that there does not exist a theory, agreeing satisfactorily with experimental data, which permits the calculation of characteristics and deformation state of disks and shafts at high temperatures. In addition he has designed and constructed apparatus for investigating sustained strength and creep of heat resistant alloys under complex stress conditions and a number of valuable results have been obtained with this apparatus.

A.P. Bobrov (TsNIIMash) discussed the choice of the nature of loading of components working at high temperatures.

B.I. Serebrenik (TsAIAM) gave a paper "On Constructional Factors of Sustained Static Strength" which describes results obtained on low-tower turbine equipment. The paper of M.V. Kulinovskiy dealt with the bearing capacity of turbine rotors.

Key participants reported on the irreversibly used for extensive coordination of work in the field of strength of gas turbines.

Card 5/7

KATS, M.S., kand.med.nauk (Moskva)

P.Dauge, physician and revolutionist (1869-1946). Sov.zdrav. 22
no.4:68-71 '63. (MIRA 16:4)
(DAUGE, PAULS, 1869-1946)

118124-12-12.

KATS, M.S., insheiner.

Improving the press mold equipment for artificial leather plants.
Leg.prom. 17 no.7:37-39 Jl '57. (MLRA 10:2)

(Leather, Artificial) (Shoe industry--Equipment and supplies)

KATS, M.S., kand. med. nauk (Moskva)

From the history of the reform of dental education. Stomatologiiia 42 no.3:85-87 My-Je'63
(MIRA 17:1)

KATS, M.S., inzh.

Lighter type of rubber heels. Kozh.-obuv. prom. 2 no. 11:35-40
N '60. (MIRA 13:12)
(Boots and shoes, Rubber)

KATS, [REDACTED] M. S.

Usloviya Pobedy, Gornyy Zhurnal, No 10, 1934, Str. 7-12
ABS in Goryuchiye Slantsy, 1935, No 5, 78

SO:

Goryuchiye Slantsy # 1934-35, TN .871
G .74

BABOIN, I.A.; KATS, M.S., otv.red.; YERSHOV, P.R., tekhn.red.

[Various types of stopes for the Moscow Basin] O tipe lav dlja
Podmoskovnogo basseina. Moskva, Ugletekhizdat, 1948. 17 p.
(Moscow Basin--Coal mines and mining) (MIRA 12:3)

KATS, M.S., inzh.

Electrochemical cleaning of press molds. Leg. prom. 18 no.8:42
Ag '58. (MIRA 11:9)
(Vulcanization) (Cleaning machinery and appliances)

KATS, M.S.

Category : USSR/Optics - Physical optics

K-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 2375

Author : Kats, M.S., Kolobayev, Ye.N., Larionova, Ye.I.
Title : Temperature Glow of Luminophors

Orig Pub : Uch. zap., Saratovsk. un-ta, 1954, 40, 131-133

Abstract : The thermal-glow curves of the phosphor $1\text{ZnS} + 0.0001\text{Ag} + 0.025\text{LiCl}$, excited with a 365-millimicron line at the temperature of liquid O_2 , displayed peaks at 110°K and 183 D, i.e., approximately at the location of the thermal-glow peaks of the ZnS-Cu phosphors. The third peak for ZnS-Cu, approximately near 290 K is missing from the ZnS-Ag curve. The first peak glows also at the liquid oxygen temperature. Increasing the amount of flux (LiCl) to 50% of the amount of ZnS causes the second peak to disappear, and causes the shallowest localization levels to predominate in the phosphor.

Card : 1/1

KATS, M.S., kandidat meditsinskikh nauk

Medical statistics in dentistry. Stomatologija no.5:56-58 S-O '54.
(NOMENCLATURE,

(MIRA 7:11)

dent.)

(DENTISTRY,
nomenclature)

KATS, M.S., kandidat meditsinskikh nauk.

Historical roots of Soviet dentistry. Stomatologija no. 4:55-58 J1-Ag '53.
(MLIA 6:9)
(Dentistry--History)

KATS, 17 2.

KATS, M.S., kand.med.nauk (Moskva)

Development of Soviet stomatology; on the 40th anniversary of the
Great October Socialist Revolution. Stomatologija 36 no.5:11-15
S-0 '57. (MIRA 11:1)
(MOUTH--DISEASES)

KATS, M.S., kand.med.nauk (Moskva)

Centennial of the discovery of cocaine. Fel'd. i akush. 27 no.3;
34-36 Mr '62. (MIRA 15:4)
(COCAINE)

KATS, M. S.

"Outline of the History of the Development of Soviet Stomatology and the Stomatological Service in the Soviet Army." Sub 30 Oct 51, Central Inst for the Advanced Training of Physicians.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

KATS, M.S., kand.med.nauk (Moskva)

Petr Nikolaevich Diatropov. Med. i akush. 24 no.12:40-42 D '59.
(MIRA 13:2)

(DIATROPOV, PETER NIKOLAEVICH, 1859-1934)

KATS, Maks Sinayevich; LUSHNIKOV, A.G., red.; CHULKOV, I.F.,
tekhn. red.

[History of Soviet stomatology] Istoryia sovetskoi stoma-
tologii; kratkii ocherk. Moskva, Medgiz, 1963. 117 p.
(MIRA 16:5)

(STOMATOLOGY)

KATS, M.Sh.; ZHURAVLEV, V.M.; AGANICHEV, P.V.

Effect of the quality of Aktyubinsk chromium ores and reducing agents on the desulfuration of carbon ferrochromium. Izv.vys. ucheb.zav.; chern. met. 8 no.4:75-82 '65.

(MIRA 18:4)

1. Aktyubinskiy zavod ferrosplavov.

KATS, M.Sh.

Sulfur distribution between carbon ferrochromium and slag.
Izv. vys. ucheb. zav.; chern. met. 7 no.8:56-60 '64.
(MIRA 17:9)
1. Aktyubinskiy zavod ferrosplavov.

KATS, M.Sh.; KHANINA, N.M.; POVOLOTSKAYA, G.L.; ZHURAVLEVA, V.I.

Determination of sulfur in carbon ferrochromium. Zav. lab. 31
no.8:944-945 '65. (MIRA 18:9)

1. Aktyubinskiy zavod ferrosplavov.

KATS, M.V., kand.med.nauk

First Latvian Conference on Medical History. Sov.med. 25 no.5:153-
154 My '62. (MIRA 15:8)
(MEDICINE--CONGRESSES)

KATS, M. YA.

Works of the Central Peat Experimental Station, (Min of Agri, RSFSR)

Volume 1, 1936, 137 pages, The Peat Bogs of the Far North and the
Asiatic Part of the USSR.

"The Peat Bogs of the Northern Part of the Pechora River Basin."
by Kats, M. Ya. and Minkina, Ts. I.

SO: Botanicheskiy Zhurnal, Vol XXXV, No 1, pp 100-110,
Jan-Feb 1950, Russian bimo per, Moscow/Leningrad (U-5511,
12 Feb 1954)

K.A.S. M. I.A. A.

23400

Voprosu o myonirovaniya pnyedpriyntly Po Izgotovlyeniyu stroyelbykh materialoviz
shlakov iz shlakov dlya stroyelbstva. Shalcht V donyeshkom bessyene. Sbornikrabot
vniiomshs (vseyesoyuz. Nauch-isslyed. In-t organizatsii myekha nizatsii shakhtnogo
strojt-va), Eyp. 1, 1949, S. 77-84

SO: LETOPIS No. 34

VLADIMIRSKIY, K.V.; KATS, M.Ya.; STASEVICH, B.M.

[Isotopic analysis of heavy water] O metodakh izotopnogo analiza
tiazheloi vody. Moskva, 1955. 15 p.

(MIRA 14:6)

(Deuterium oxide)

KATS, M.Ya.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1567
AUTHOR KAC, M.JA., KUKAVADZE, G.M., SERDJUK, R.L.
TITLE On the Coefficient of the Separation of Liquids of BCl_3 from their
Vapor with Respect to Chlorine Isotopes.
PERIODICAL $Zurn.techn.fis.$, 26, fasc.10, 2401-2402 (1956)
Issued: 11 / 1956

For some time, analyses of the isotopes of boron and chlorine have been carried out in BCl_3 samples enriched by rectification at $23^\circ C$ with the light isotope B^{10} . Here the results obtained from the mass spectra recorded on the band of the self-recorder EPP-09 are mentioned. Each number mentioned represents the average value obtained on the basis of 15 - 20 measurings. The ratio of the concentrations of the isotopes of boron and chlorine in the initial sample is $B^{11}/B^{10} = 4,13 \pm 0,02$ and $Cl^{35}/Cl^{37} = 2,94 \pm 0,02$. From these figures the following conclusions may be drawn:
1.) The coefficient of the separation of the BCl_3 liquid from its vapor is 1,001. This holds good on the condition that in the column an equal number of theoretical weights of boron and chlorine is realized, and that the coefficient (with respect to the boron isotopes) for the separation of the BCl_3 liquid from its vapor is equal to 1,004. Here the concentration of the light isotope Cl^{35} is greater in vapor than in the liquid.

PA - 1567

Zurn.techn.fis, 26, fasc.10, 2401-2402 (1956) CARD 2 / 2
2.) On the occasion of the rectification of BCl_3 the separation of the isotopes
of B and Cl takes place with opposite signs: In the boiling vessel the light
boron isotope B^{10} and the heavy chlorine isotope Cl^{37} concentrate, but in the
residues it is the other way round. Among the eight molecules
 $\text{B}^{10}\text{Cl}_3^{35}$, $\text{B}^{10}\text{Cl}_2^{35}\text{Cl}^{37}$, $\text{B}^{10}\text{Cl}^{35}\text{Cl}_2^{37}$, $\text{B}^{10}\text{Cl}_3^{37}$, $\text{B}^{11}\text{Cl}_3^{35}$, $\text{B}^{11}\text{Cl}_2^{35}\text{Cl}^{37}$,
 $\text{B}^{11}\text{Cl}^{35}\text{Cl}_2^{37}$ and BCl_3^{37} , the $\text{B}^{11}\text{Cl}_3^{35}$ molecules are the most, and the B^{10}Cl mole-
cules are the least volatile.

INSTITUTION:

KAT'S, M.YA. KAT'S, M. YA.

SUBJECT USSR / PHYSICS
AUTHOR KAC, M.JA., KUKAVADZE, G.M., SERDJUK, R.L.
TITLE Enrichment of Boron with the Isotope B¹⁰.
PERIODICAL Zurn.techn.fis, 26, fasc.12 (2744-2748 (1956)
Issued: 1 / 1957

CARD 1 / 2

PA - 1830

It was the purpose of this work to work out a plan for a laboratory plant for the winning of boron which is enriched with B¹⁰. This problem was solved by the rectification of BC₃. At first the plant is described. From the data mentioned it may be seen that 1. The time in which isotopic equilibrium is established amounts to less than 20 hours. 2. With the isotopic equilibrium established between the liquid BC₃ and its vapor the concentration of the gas (B¹¹) surpasses that of the liquid. 3. On the occasion of the rectification of BC₃, the distribution coefficient between the liquid and the vapor with respect to boron isotopes is $\alpha = 1.0043$ at 23° C. In the same plant the attempt was made to obtain a certain quantity of BC₃ which was enriched with B¹⁰. Measuring results obtained for the ratio of $\frac{B^{11}}{B^{10}}$ concentrations in 21 successive cases of extraction are shown together in a table. The analysis of all measurements showed that the entire enrichment diminishes somewhat in the course of time. Measurements of the isotopic composition of chlorine showed in the various samples that the distribution coefficient with respect to chlorine isotopes between BC₃ and its vapor is less

Zurn.techn.fis, 26, fasc.12 2744-2748 (1956) CARD 2 / 2 PA - 1830
than 1.001. The isotope analysis of BCl_3 was carried out in a mass spectrometer.
According to works by SJUTCE, OSBERGHAUS, and THODE, MACNAMARA, LOSSING, and
CALLINS, as well as the unpublished works by the authors the measuring results
with respect to the ratio:

$\frac{B^{11}}{B^{10}}$ for the "initial" product apparently in every concrete case depend on the
place where boron was found. Besides it depends on the method of winning the re-
spective boron compound and fluctuations between

$\frac{B^{11}}{B^{10}}$ and $4.10 - 4.46$. The difference of this ratio for various boron compounds
is ten times the amount of measuring errors.

INSTITUTION:

AUTHORS:

Kats, M. Ya., Lapteva, F. S.

76-32-4-22/43

TITLE:

Isotopic Exchange Between Water and Carbon Dioxide of Oxygen
(Izotopnyy obmen kisloroda mezhdu vodoy i dwukis'yu
ugleroda)

PERIODICAL:

Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4,
pp. 864-868 (USSR)

ABSTRACT:

In the elaboration of the isotopic analysis the experiments were carried out at increased pressure of gaseous carbon dioxide as well as at different temperatures. As reaction vessel served a balloon flask with a volume of 2 liters which rotated in a thermostat. The water was mixed with the isotopes O¹⁷ and O¹⁸, as well as with deuterium, and after the adjustment of the transition equilibrium of the isotopes into carbon dioxide the change of water density was calculated according to an equation. A diagram of the results obtained calculated according to Yuri (Reference 4) as well as of isotopic equilibrium is given. It was found that the production of the equilibrium in an interval of from 0.5 - 6 atmospheres ex.

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Isotopic Exchange Between Water and Carbon Dioxide
of Oxygen

76-32 4-22/43

cess pressure does not depend on the pressure of carbon dioxide and that the exchange of oxygen isotopes is a reaction of first order. Measurements of the temperature dependence were also carried out as well as of the deuterium concentration; in this it was found that the velocity of the exchange reaction in the system $D_2O - CO_2$ is almost

half that of $H_2O - CO_2$. Two reaction schemes for solution at pH<8 as well as pH>10 are given; in the first case the influence of the diffusion in the given biphasic system is pointed out.

There are 3 figures and 6 references, 3 of which are Soviet.

SUBMITTED: December 29, 1956

AVAILABLE: Library of Congress

1. Oxygen isotopes--Exchange reactions 2. Deuterium oxide
---Exchange reactions 3. Water--Exchange reactions 4. Exchange
reactions--Velocity 5. Carbon dioxide--Applications

Card 2/2

5(2)

SOV/75-14-2-15/27

AUTHORS: Kats, M. Ya., Lapteva, F. S.

TITLE: Isotopic Analysis of Water (Izotopnyy analiz vody)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 2, pp 227-233
(USSR)

ABSTRACT: The method of isotopic analysis of water devised by the authors is based upon the isotopic exchange between water and carbon dioxide and on a measurement of density using a differential pycnometric method. The isotopic reaction between water and CO₂ at 50-100 atmospheres absolute pressure and 90° increases the possibility of determining the concentration of heavy oxygen isotopes in water since in the hitherto known methods (Refs 2, 3) this reaction is performed only at atmospheric pressure and room temperature. Due to the isotopic exchange of water enriched with ¹⁷O and ¹⁸O with CO₂ the density of water is reduced. From this reduction of density the concentration of heavy oxygen isotopes in water may be determined. In the variant of the differential pycnometric method of determining the density, which was devised by the authors,

Card 1/3

Isotopic Analysis of Water

SOV/75-14-2-15/27

the effect of temperature fluctuations of the thermostat is considerably reduced. This fact considerably simplifies the measurements in mass analyses and reduces the error in the pycnometric method. The water of the Moscow water supply system served as comparative water. In the computation of the isotopic composition of water the following equation holds:

$$\Delta \varrho / \varrho_0 = \Delta \varrho_D / \varrho_0 + \Delta \varrho_K / \varrho_0 \quad (\Delta \varrho / \varrho_0 = \frac{\varrho - \varrho_0}{\varrho_0}; \Delta \varrho_D / \varrho_0 = \frac{\varrho_D - \varrho_0}{\varrho_0}; \\ \Delta \varrho_K / \varrho_0 = \frac{\varrho_K - \varrho_0}{\varrho_0}; \quad \varrho - \text{density of the water to be investigated}; \\ \varrho_0 - \text{density of the comparative water}; \varrho_D - \text{density of the water to be investigated in which only the deuterium concentration is higher than in the comparative water}; \varrho_K - \text{density of the water to be investigated in which only the concentration of heavy oxygen isotopes is higher than in the comparative water}). \Delta \varrho_D / \varrho_0 \text{ and } \Delta \varrho_K / \varrho_0 \text{ were determined experimentally.} \\ \text{Using the above equation the deuterium concentration and the effective concentration of heavy oxygen isotopes (approximately } C_{18}O + 0.5 C_{17}O \text{) may be determined from these quantities.}$$

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Isotopic Analysis of Water

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The method devised permits the determination of deuterium with an accuracy of up to $\pm 0.001\%$ at very low concentrations and up to $\pm 0.01\%$ at very high concentrations ($\sim 99\%$) of deuterium if the concentration of the heavy oxygen isotopes is known. If the deuterium- as well as the heavy oxygen isotope concentration must be determined the error of determination is almost twice as high. The apparatus used for the determination are shown in 5 illustrations and described in detail. Also the purification of water, the calibration of the pycnometer, and the process of the entire determination are described in detail. The corrections of the determination of $\Delta q/q_0$ at 25° are summarized in a table; a further table contains the coefficients of the computation of the deuterium content at temperatures of $20-30^\circ$. The authors thank A. I. Alikhanov and M. I. Kornfel'd for their interest in this work and R. L. Serdyuk for valuable advice. There are 7 figures, 2 tables, and 10 references, 9 of which are Soviet.

SUBMITTED: February 13, 1958

Card 3/3

KATS, M.Ya.; REZNIKOV, P.P.; BARANOV, V.V.

Testing the isodynamic electromagnetic separator for minerals.
Izv. AN SSSR. Ser.geol. 27 no.7:106-114 Jl '62. (MIRA 15:6)

1. Geologicheskiy institut AN SSSR, Moskva.
(Magnetic separation of ores)

KATS, M.Ya.; BARANOV, V.V.

Gradient pipe without ultrathermostate and prospects for using
it in mineralogical studies. Izv. AN SSSR Ser. geol. 28 no.9:
93-98 S '63. (MIRA 16:10)

1. Geologicheskiy institut AN SSSR. Moskva.

ACCESSION NR: AP4041040

S/0120/64/000/003/3152/0157

AUTHOR: Kats, M. Ya.; Stadnikov, A. G.; Gol'din, L. L.; Baranov, V. V.

TITLE: Method for designing the pole shape for single-zone isodynamic magnetic separators

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 152-157

TOPIC TAGS: separator, magnetic separator, single zone magnetic separator, isodynamic magnetic separator

ABSTRACT: A method of calculating isodynamic fields is described; it is suitable for both the single-zone magnetic separator design and the measurements of magnetic susceptibility. Since the neutral pole obstructs the entrance into the gap, it is desirable that the isodynamic field be created without the neutral pole. Formulas that describe the pole shape ensuring a quasi-isodynamic field without the neutral pole are developed. Curves plotted in dimensionless coordinates

Cord 1/2

KATS, M. Ya. (Prof.)

"Moortypen und ihre Verteilung in kalten und milden Zonen der nördlichen
Hemisphäre."

report submitted for the 7th Intl. Cong. of Moorland Research Frankskoy Lagne/
Franzensbad-Prague, 15-19 Sep 60.

KATS, N.Ya.

Flotation method for measuring the specific gravity of individual mineral grains. Izv. AN SSSR. Ser. geol. 25 no.10:96-105 O '60.
(MIRA 13:10)

1. Geologicheskiy institut AN SSSR, Moskva.
(Flotation) (Specific gravity) (Minerals)

KATS, M. Ya.

Cavitational strength of certain materials. Akust. zhur. 7 no.1:47-52
'61. (MIRA 14:4)

1. Geologicheskiy institut AN SSSR, Moskva.
(Cavitation) (Minerals)

SHUTOV, V.D.; KATS, M.Ya.; BARANOV, V.V.

Use of ultrasonic waves in a mineralogical analysis of sedimentary rocks.
Izv. AN SSSR. Ser. geol. 26 no. 4:85-98 Ap '61. (MIRA 14:5)

1. Geologicheskiy institut AN SSSR, Moskva.
(Ultrasonic waves--Industrial applications)
(Rocks, Sedimentary--Analysis)

35797
S/120/62/000/001/045/061
E039/E485

5.5800

AUTHOR: Kats, M.Ya.
TITLE: The measurement of the density of solid bodies with
the aid of a gradient tube

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 178-181

TEXT: It is frequently of considerable interest to be able to make exact measurements of the density ($\pm 0.001 \text{ g/cm}^3$) of separate grains of solid bodies ($> 0.1 \text{ mm}$) and also to determine the density distribution of grains in a given sample or a mixture of grains. This is of particular interest in mineralogy. These problems are easily solved by the method described in the present article. The upper end of a copper tube is maintained at a temperature t_0 , the lower end at some lower temperature t_1 and the tube surface thermally insulated. Inside is placed a glass tube containing a heavy liquid, such as bromoform. When thermal equilibrium is achieved, a constant temperature gradient is established along the tube with the liquid density ρ_0 at t_0 changing to ρ_1 at t_1 . If a solid grain (or a drop of immiscible liquid) with a density ρ' , which lies in the range

Card 1/2

S/120/62/000/001/045/061

E039/E485

The measurement of the density ...

$\rho_o < \rho' < \rho_1$, is introduced into the liquid it will move up and down until it reaches an equilibrium condition when the density of the liquid is equal to the density of the grain. Thermal equilibrium is established in about 20 min. In addition to simple density measurements, it is possible to determine the statistical density distribution of a granular mixture up to about 4 g/cm³. There are 3 figures and 1 table.

ASSOCIATION: Geologicheskiy institut AN SSSR
(Geological Institute AS USSR)

SUBMITTED: June 9, 1961

Card 2/2

KATS, M.Ya.; BELYAYEVA, L.V.

Some physicochemical constants of heavy liquids used in the study
of minerals. Izv.AN SSSR.Ser.geol. 27 no.3:100-113 Mr '61.
(MIRA 15:2)

1. Geologicheskiy institut AN SSSR, Moskva.
(Liquids--Analysis) (Viscosity)

LOGOVINENKO, N.A., otv. red.; KATS, M.Ya., red.; KOSSOVSKAYA, A.G.,
red.; SHUTOV, V.D., red.; SHLEPOV, V.K., red. izd-va;
DOROKHINA, I.N., tekhn. red.

[Physical research methods of sedimentary rocks and minerals]
Fizicheskie metody issledovaniia osadochnykh porod; doklady.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 270 p. (MIRA 16:1)

1. Vsesoyuznoye soveshchaniye po fizicheskim metodam issledovaniia
osadochnykh porod i mineralov. 1st, Moscow, 1960. 2. Geologicheskiy institut Akademii nauk SSSR, Moskva (for Kossovskaya,
Shutov, Kats).

(Rocks, Sedimentary—Analysis) (Mineralogy)

KATS, M. Ya.; STADNIKOV, A.G.; GOL'DIN, L.L.; BARANOV, V.V.

Method for calculating the pole profile of a one-region isodynamic magnetic separator. Prib. i tekhn. eksp. 9 no.3:152-157 My-Je '64
(MIRA 18:1)

1. Geologicheskiy institut AN SSSR,

KATS, M. V.

Chemical Abst.
Vpl. 48 No. 5
Mar. 10, 1954
Organic Chemistry

Mechanism of esterification of glutaric acid. M. S. Zladek, M. E. Kats, and G. V. Cherevash. *Zhur. Osnovnoi Khim.* 23, 212-15 (1953). Examin. of the effect of various conditions on the esterification of glutaric acid (I) indicates that the 1st step in the reaction is the formation of di-Me glutarate which is acidolyzed to the mono-Me ester. I (50 g.) heated with various amts. of MeOH in the presence of H₂SO₄ gave only di-Me glutarate. The effect of solvents on a mixt. of 50 g. I and 15 g. MeOH is shown as follows in reactions run on a steam bath. In 125 ml. Me₂CO with 5 ml. concd. H₂SO₄ in 1 hr. formed 81% di-Me ester and 0% mono-Me ester are formed, but after 4 hrs. the amounts are 26.6 and 13.6 %, resp.; after 8 hrs., 23.8 and 18.5%; and after 13 hrs. 22.5 and 16.9%, resp. In 100 ml. (CH₂Cl)₂ without H₂SO₄ in 13 hrs. 20.0% di-Me glutarate is formed; this rises to 38.6% if 5 ml. H₂SO₄ is present. Without H₂SO₄ in 50 ml. Me₂CO and 50 ml. (CH₂Cl)₂ in 18 hrs 16.6% di-Me ester is formed, but in the presence of 5 ml. H₂SO₄ 41.8% di-Me ester and 12.7% mono-Me ester are formed. In CHCl₃ without H₂SO₄ 16% di-Me ester forms in 13 hrs., while with 5 ml. H₂SO₄ 65% of the same ester is formed. Heating an equimolar mixt. of I and MeOH 2 hrs. at 145-50° gave 29.5% mono-Me and 21.6% di-Me glutarates. After 13 hrs. of such heating 69% mono-Me ester and only a trace of di-Me ester are formed. Longer heating does not cause any further change. Heating equimolar mixts. of I and di-Me glutarate as above leads to a progressive decline of the di-Me ester and increase of the mono-Me ester.

G. M. Kosolapoff

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9

KATS, M.Ye., inzh.; MOTIN, G.I., inzh.; PUSHIN, A.K., inzh.

Remodeling scraper feeders for milled peat. Elek.sta. 31
no.2:87-89 F '60. (MIRA 13:5)
(Stokers, Mechanical)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9"

YAKOVENKO, V.A.; KATS, N.A.

Respiration of newly harvested corn in connection with its
drying and storage. Izv.vys.ucheb.zav.; pishch.tekh. no.3:
23-28 '59. (MIRA 12:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina.
Kafedra elevatorno-skladskogo khozyaystva i khraneniya zerna.
(Corn (Maize)--Storage)

KATS, N. I.

"The basis of classification of the history of the KPSS"

report presented at a Conference on Library Cataloguing, Leningrad, Library of
AS USSR, 24-26 Apr 1958

1. KATS, N. L.; SIKOROV, N. K.
2. USSR (600)
4. Chromatographic Analysis
7. Spectra of fluorescence of petroleums and their fractions in liquid state and in chromatographic column. Izv. AN SSSR. Ser. fiz. 15 no. 6 '51.
9. Monthly list of Russian Accessions, Library of Congress, January 1953. Unclassified.

SULTANOV, D.A.; KATS, N.M.

Physico-mechanical properties of Apsheronian rocks in the
Kura-Iori interfluve (in the boundaries of the Azerbaijan
S.S.R.). Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.2;
44-51 '65. (MIRA 18;8)

KATS N.N

601

POSSIBILITIES AND PRACTICABILITIES 109

Volumetric determination of iridium in presence of Co, Ni, Cr and Bi. A. A. Grinberg and N. N. Kata. *Bull. acad. sci. U. R. S. S., Classe sci. math., Ser. chim.* 1938, 941-61 (in English, 940-7).—Ir^{III} present as [IrCl₆]³⁻ may be titrated with KMnO₄, and Ir^{IV} present as [Ir-Cl]⁴⁻ with Fe²⁺. From the oxidation-reduction potentials the latter titration should give slightly low results. The accuracy of both titrations is markedly influenced by the presence of salts of Co, Ni, Cr and Bi. B. C. P. A.

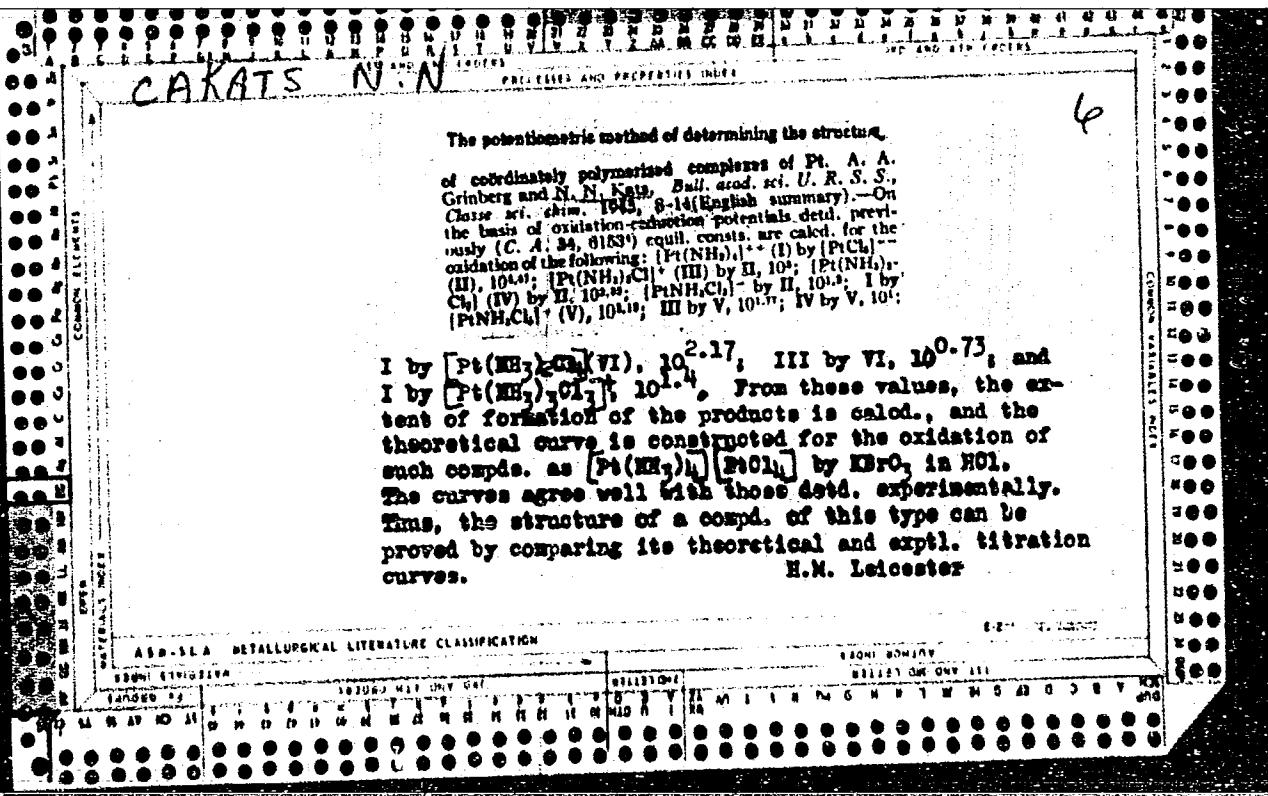
AIA-SEA METALLURGICAL LITERATURE CLASSIFICATION

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9"



KATS, N.N.

A-2

BC

(Received at Bureau) (Original with 'homoc' ambigrams)
 V. A. A. Grinberg and V. N. Kats U. R. S. S. R. Chem. USSR.
 1950, 20, 248-253, 261-266 (U.S. transl.)—Aromatic NH₂-acids
 yield co-ordination compounds in which they occupy only one co-
 ordination position via the NH₂ group. Only in the case of the
 ortho-isomer is there a partial formation of a cyclic derivative. The
 three isomeric aminoacetic acids give isomeric compounds,
 $\text{PtCl}_3(\text{NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H})_2$, in which their isomerism is due to that
 of the co-ordination substituents. A reaction with thiourea indicates
 the cis-conformation of the compound with the para-acid. Thus
 the isomeric aminoacetic acids in their additive compounds
 behave like acids.

When $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$ (4 mol.) and K_2PtCl_4 (1 mol.) are
 dissolved in H_2O and heated at 100° under CO_2 , a yellowish ppt.
 separates which is titrated by titration with cold KOH in the
 presence of phenolphthalein into a light blue-yellowish
 $\text{Pt}(\text{NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H})_2$ (II) (at end of titration) and $\sigma\text{-}(\sigma\text{-}\text{I})$
 (mol. at end of titration, but pptd. on addition of conc. HCl);
 under similar conditions, $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$ affords $\sigma\text{-}(\text{m-}\text{III})$,
 which has acid properties and can be titrated with cold alkali in
 presence of phenolphthalein, while $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$ very rapidly
 forms a blue precipitate, $\text{Pt}(\text{NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H})_2$ (II), contaminated with only traces
 of the para-acid which can be removed by EtOH. If this is titrated
 with alkali and then treated with conc. eq. $\text{CS}(\text{NH}_2)_2$, at 100° it
 gives a yellow crystal of $[(\text{Pt}(\text{CS}(\text{NH}_2)_2)\text{Cl}_2)$, thereby behaving
 like a IV derivative. I, like the free $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$ releases
 CO_2 abundantly at 100-300°, and II resembles $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$
 in not evolving CO_2 when heated. Whereas $\sigma\text{-NH}_2\text{C}_6\text{H}_4\text{CO}_2\text{H}$
 eliminates CO_2 at 215°, III does not exhibit this phenomenon, even
 when heated to a fairly high temp. Greyish-black residues remain
 after thermal decomposition of the co-ordination compounds.

H. WEN.

Acad. Sci. USSR

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9

10/15/00

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9"

KATS, N.N. (N.V.)?

In the article, "Some Problems of Arc Spray Welding in the Soviet Union," N. N. Kats of the Moscow Textile Institute describes methods used by the laboratories of the Moscow Textile Institute in dealing with problems of the theory of the flashing-off process, the bonding of the sprayed coating and the material surface (molecular forces, mechanical forces, or a combination of both?), the use of sprayed coatings as bearing surfaces, and the substitution of castings with sprayed steel or alloyed coatings for many automobile parts now made of steel.

The article is a reprint of a paper read at the First International Conference on Metal Spraying held in Halle in 1956. (Schweisstechnik, No 4, Apr 57, pp 137-140) (U)

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"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9

KATS, N.Y.

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Kats, N. V. Metal Spraying. (In Russian.) Pp. 88. 1940. Kbarkov.
(6 Rbl.)

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721120018-9"

KATS, N. V.

"Electric Metal Coating by Spraying in Repair Work." Thesis for degree of Cand.
Technical Sci. Sub 4, Jul 50, Moscow Inst of Chemical Machine Building.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering
in Moscow in 1950. From Vechernaya Moskva, Jan-Dec 1950.

KATS, N. V.

Elektrometallizatsiya [Electrometallization]. Moskva, Sel'khozgiz, 1953. 220 p.

SO: Monthly List of Russian Accessions, Vol 6 No 6 September 1953

RIDGE, N.Y.

1. SHASHKIN, S.G., Eng. KATS, N. V.
2. USSR (600)
4. Machine Tools - Maintenance and Repair
- 71 Establishing a standard system for planned, periodic repairs. Vest mash No. 1 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BELEN'KIY, Simon Isakovich; KHUDYKH, M.I., prof., retsenzent; KATS, N.V., dots., spets. red.; MIZERI, A.A., dots., spets. red.; KALININA, N.M., red.; SHAPENKOVA, T.Z., tekhn. red.

[Handbook on the maintenance and repair of textile machinery; information on materials used for the manufacture and repair of textile machinery, on the reconditioning of parts, allowances and fittings] Spravochnik po remontu tekstil'nogo oborudovaniia; svedeniia o materialakh, primeniamykh pri izgotovlenii detalei i remonte tekstil'nykh mashin, o vosstanovlenii detalei, dopuskakh i posadkakh. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR, 1961. 717 p.

(MIRA 14:11)

(Textile machinery--Maintenance and repair)

KHUDYKH, Mikhail Il'ich; KATS, N.V., retsenzent; MIZERI, A.A.,
retsenzent; SHTEYNGART, M.D., red.; SHAPENKOVA, T.A.,
tekhn. red.

[Maintenance and repair of textile machinery] Remont tek-
stil'nykh mashin. Izd.2., perer. i dop. Moskva, Rost~~skh~~-
izdat, 1963. 626 p. (MIRA 16:5)
(Textile machinery--Maintenance and repair)

BELEN'KIY, Simon Isaakovich; KATS, N.V., retsenzent;
SHTEYNGART, M.D., red.

[Increasing the service life of parts in the modernization
and repair of textile equipment] Povyshenie dolgovechnosti
detalei pri modernizatsii i remonte tekstil'nogo oborudova-
nia. Moskva, Izd-vo "Legkaia industriia," 1964. 366 p.
(LIRA 17:7)

AL'TER-PESOTSKIY, F.L.; KATS, N.V., doktor tekhn. nauk, prof., rukovoditel'
raboty

Protection of the metal structures and equipment in sulfur dioxide
plants against atmospheric corrosion. Khim.volok.no.5:49-52 '64.
(MIRA 17:10)

KATS, N. YA.

Works of the All-Union Peat Institute, (Min of Agri. RSFSR),

Number 4, 1933, 111 pages, A Compendium of Instruction on the
Study of Peat and peat beds:

Part 1. The Geobotanical Analysis of Peat.

"Instruction for Analyzing (Green() Mosses in Peat." by Kats, N.Ya.

SO: Botanicheskiy Zhurnal, Vol XXXV, No 1, pp 100-110,
Jan-Feb 1950, Russian bimo per, Moscow/Leningrad (U-5511,
12 Feb 1954)

KATS, N. YA.

Dynamics of Permafrost in the lower reaches of the Ob in the post
ice age period.

Byull. Mosk. Obshch. Ispyt. Prirody, Otd. Biol. Vol. 48#2/3, 1939

SO: Trudy Arkhicheskogo Nauchno-Issledovatel'skogo
Instituta, GUSMP, Council of Ministers, Vol. 201,
1948

1. KATS, N. YA.
2. USSR (600)
4. Geology and Geography
7. Types of Marshlands in the USSR and in Western Europe and Their Geographical Distribution, N. Ya. Kats. (Moscow, Teography Press, 1943). Reviewed by S. I. Perlin, Sov. Kniga, No. 9, 1949.
9. ~~Report U-~~ 3081, 16 Jan. 1953, Unclassified.

KATS H. YA. i KATS, S. V.

26234 O pezdnechetvertichney istorii dandshchta yuzhney chasti eapadney sibiri.
pochvovedenie, 1949, №. 8, s. 441-56 Bibliogr: 15 NAZV.

SO: LETOPIS' NO. 35, 1949

1. KATS, N. YA.
2. USSR 600
4. Phytogeography
7. Glacial shelters and the distribution of broadleaf trees on the East European plain in the post-Valdai period, Biul, MOIP, Otd. biol, 57, No. 6, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KATS, N. YA.

Baltic Provinces - Forests and Forestry

History of Forests in the Baltic region in the late and post-Valdai period,
N. Ya. Kats. Dokl. AN SSSR 84 No. 3, 1952.
red. 11 March 1952

SO: Monthly List of Russian Accessions, Library of Congress, September ² 1953, Uncl.

1. KATS, N. Ya.: POKROVSKY, Ye P. [unclear].
2. USSR (60c)
4. Baraba Steppe - Marshes
7. Connection between formation of marshes and conditions of relief development and neo-tec-tonics of Baraba. Dokl. AN SSSR 87, no. 2. 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KATS, H.Ya. [reviewer].

"Pollen analysis." Reviewed by H.IA.Kats. Biul.Kom.chetv.per. no.17:102-
108 '53. (MLRA 6:11)
(Pollen, Fossil)

KATS, N.Ya. [reviewer].

"Transactions of the conference of spore and pollen analysis, 1948-1950."
Reviewed by N.IA.Kats. Biul.Kom.chetv.per. no.17:108-112 '53.

(MIRA 6:11)

(Pollen, Fossil--Congresses)

Konferentsiya po spore i polenam, Akad SSSR

KATS, N.Ya.; KATS, S.V.; SUKACHEV, V.N., akademik.

Paleoecology and chronology of the distribution of spruce in Europe, during the post-Valdai period. Dokl.AN SSSR 90 no.4:655-658 Je '53.
(MLRA 6:5)

1. Akademiya Nauk SSSR (for Sukachev).

(Spruce--Fossil)

KATS, N.Ya.

Centers of conservation and settlement time and conditions of
certain broadleaf trees in the European U.S.S.R. during the
Valdai and post-Valdai epochs. Trudy Kem.chetv.per.12:54-69
'55. (Trees, Fossil) (MIRA 9:4)

ZOLOTAREV, M.A.; PIDOPLICHKO, I.C.; FEDOROV, P.V.; VASIL'YEV, V.N.; IVANOVA, I.K.; GROMOV, V.I.; SOKOLOV, D.S.; ZHIRMUNSKIY, A.M.; PARMUZIN, Yu.P.; PLYUSHNIN, I.I.; KATS, N.Ya.; GRICHUK, V.P.; YEFREMOM, Yu.K.; MOSKVTIN, A.I.; LEBEDEV, V.D.; TEODOROVICH, G.I.; ZVORYKIN, K.V.; MIKHNOVICH, V.P.; GALITSKIY, V.V.; MAKEYEV, P.S.; NIKIFOROVA, K.V.; GORDEYEV, D.I.; YANSHIN, A.L.; DUMITRASHKO, N.V.; SHANTSER, Ye.V.; P'YAVCHENKO, N.I.; FLEROV, K.K.; PIDOPLICHKO, I.G., dokter biologicheskikh nauk, professor.

Papers presented at the conference on the history of Quaternary flora and fauna in relation to the development of Quaternary glaciation.
Trudy Kem. chetv. per. 12:129-189 '55. (MIRA 9:4)

1. Gidrometeosluzhba (for Zeletarev). 2. Zoologicheskiy institut AN USSR (for Pidoplichko). 3. Institut ekologii AN SSSR (for Fedorov). 4. Beta-nicheskiy institut AN SSSR (for Vasil'yev). 5. Komissiya po izucheniyu chetvertichnogo perioda AN SSSR (for Ivaneva). 6. Institut geologicheskikh nauk AN SSSR (for Gromov, Yanshin, Nikiforova, Moskvitin). 7. Moskovskiy geologo-razvedochnyy institut imeni Ordzhonikidze (for Sokolov). 8. Akademiya nauk Belorusskoy SSR (for Zhirmunskiy). 9. Moskovskiy institut inzhenerov vodnogo khozyaystva (for Plyusnin). 10. Geograficheskiy fakultet Moskovskogo gosudarstvennogo universiteta (for Yefremov, Parmuzin). 11. Moskovskiy gosudarstvennyy universitet (for Lebedev, Zvorykin). 12. Institut nefti AN SSSR (for Teodorovich). 13. Transproektkar'yer Ministerstva putey soobshcheniya (for Mikhnovich). 14. Vsesoyuznyy aero-geologicheskiy trest (for Galitskiy). 15. Sovet po izucheniyu proizvoditel'nykh sil AN SSSR (for Makeyev).

(Continued on next card)

ZOLOTAREV, M.A.----(continued) Card 2.

16. Laboratoriya gidro-geologicheskikh problem AN SSSR (for Gordeyev).
17. Institut geografii AN SSSR (for Dumittrashko, Grichuk).

(Paleontology) (Paleobotany) (Glacial epoch)

KATS, N.Ya.

Formation of forests and the climate during the middle and
recent Pleistocene and Holocene. Biul. MOIP. Otd. biol.
60 no.3:49-69 My-Je '55. (MLRA 8:9)
(Paleobotany)

KATS, N.Ya.; KATS, S.V.

New data on interglacial deposits at Novyye Nemykar in Smolensk Province. Izv.AN SSSR.Ser.geog. no.2:72-78 Mr-Ap '56. (MLRA 9:8)
(Novyye Nemykar--Pollen, Fossil)

KATS, N.Ya.

Work of the Committee of Swamp Research of the All-Union Society of
Soil Scientists within the decade 1946-1955; Pochvevedenie no.6:129-
133 Je '56. (MLRA 9:10)

(Swamps)

KATS, N.Ya.; KATS, S.V.

Interglacial deposits of the Mikulin period (Biss-Würm) near the
village of Korenevo in Moscow Province. Pochvovedenie no.9:101 E'56.
(MIRA 10:1)
(Moscow Province--Geology, Stratigraphic)

KATS, N.Ya. (Moskva).

Dulichium spathaceum Pers. and other thermophytic species of the
last interglacial epoch. Bot.zhur.41 no.10:1420-1427 O '56.

(MIRA 10:1)

(Paleobotany)

KATS, N.Ya.

"Hilled peat bogs." N.I.Priavchenko. Reviewed by N.IA.Kats. Biul.
MOIP. Otd.biol. 61 no.3:98-101 My-Je '56. (MLRA 9:10)
(PEAT BOGS)

Kats, N.YA.

5-2-2/35

SUBJECT: USSR/Geology

AUTHORS: Kats, N.Ya., Kats, S.V., Salov, I.N.

TITLE: Russian-Wurmian (Mikulinskiy) Interglacial Deposits near Ryasna Village (Ries-Vyurmskiye (Mikulinskiye) mezhdvednikovyye otlozheniya u d. Ryasna, Ponizovskogo rayona, Smolenskoy obl.)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiy, 1957, #2, pp 15-23 (USSR)

ABSTRACT: The authors describe the cross section of sediments of the Riss-Wurm (Mikulinsk) age and establish the position of the southern border of the Wurm (Kalinin) glaciation in the region of Smolensk.

A pollen diagram is given and the development of forests is divided into 4 phases:

1. The phase of pine-trees;
2. The phase of oak-trees; temperature rises and reaches the maximum;
3. The phase of hornbeams, foliage with broad leaves and alder-trees; some drop of summer temperature and increase of

Card 1/2

5-2-2/35

TITLE: Russian-Wurmian (Mikulinskij) Interglacial Deposits near Ryasna Village (Riss-Vyurmskiye (Mikulinskiye) mezhdlednikovyye otolozheniya u.d. Ryasna, Ponizovskogo rayona, Smolenskoy obl.) humidity;

4. The phase of pine-trees and fir-trees; the further drop of temperature which, at the end of this phase, was lower than at present.

A number of macrofossils of plants growing in the warm climate is cited. Among them is Dulichium spathaceum, a leading fossil of the Mikulinsk inter-glacial period.

The article contains 1 diagram and 2 tables.
The bibliography lists 11 Slavic references.

ASSOCIATION: Not indicated.

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

KATS, N.Ya.

Boundaries of peat-bog soils, plant habitats and their formation
in relation to climate and geological history [with summary in
English]. Pochvovedenie no.5:12-21 My '57. (MLRA 10:9)
(Peat soils) (Phytogeography)

KATS, N.Ya.

KATS, N.Ya.

The problem of plant interrelationships [with summary in English].
Biul.MOIP. Otd.biol. 62 no.4:69-78 Jl-Ag '57. (MIRA 10:11)
(BOTANY--ECOLOGY)

KATS, N.Ya.; KATZ, S.V.; SALOV, I.N.

Russian-Wurmian (Mikulino) interglacial deposits in the Ryasna
area, Ponizov'ye District, Smolensk Province. Biul. MOIP. otd.
geol. 32 no.2:15-23 Mr-Ap '57. (MIRA 11:3)
(Ponizov'ye District--Geobotany)

KATS, N.Ya.

Swamp types and their distribution in cold and moderate zones
of the Northern Hemisphere [with summary in English]. Pochvovedenie
no. 6:13-20 Je '58. (MIRA 11:?)
(Swamps)